CLAIMS

What is claimed is:

1. A method comprising:

accessing a description of a Web service;

generating a Web service client proxy based, at least in part, on the accessed description of the Web service;

providing a client protocol implementation for the generated Web service client proxy, wherein the provided client protocol implementation is to process a message exchanged between the Web service client proxy and the Web service; and

setting a feature of the client protocol implementation to define a behavior of the Web service client without regenerating the Web service client proxy.

2. The method of claim 1, wherein setting the feature of the client protocol implementation comprises:

selecting an authentication type for a client authentication protocol implementation to define an authentication type for the message exchanged between the Web service client proxy and the Web service.

3. The method of claim 2, wherein selecting the authentication type for the client authentication protocol implementation comprises:

selecting an X.509 certificate authentication type for the client authentication protocol implementation.

4. The method of claim 1, wherein setting the feature of the client protocol implementation comprises:

selecting a HyperText Transport Protocol (HTTP) proxy for a client HTTP proxy protocol implementation to define an HTTP proxy for the message exchanged between the Web service client proxy and the Web service.

5. The method of claim 1, wherein setting the feature of the client protocol implementation comprises:

selecting a wrapper for a client wrapper protocol implementation to define a wrapper for the message exchanged between the Web service client proxy and the Web service.

6. The method of claim 5, wherein selecting the wrapper for the client wrapper protocol implementation comprises:

selecting a header for a client header protocol implementation to define a header for the message exchanged between the Web service client proxy and the Web service.

7. The method of claim 6, wherein selecting the header for the client header protocol implementation comprises:

selecting a Simple Object Access Protocol (SOAP) header for a client SOAP header protocol implementation to define a SOAP header for the message exchanged between the Web service client proxy and the Web service.

8. The method of claim 1, wherein setting the feature of the client protocol implementation comprises:

setting a session feature for a client session protocol implementation to define a session feature for the message exchanged between the Web service client proxy and the Web service.

9. The method of claim 8, wherein setting the session feature comprises:

restarting a session between the Web service client and the Web service.

10. The method of claim 1, wherein accessing the description of a Web service comprises:

accessing a Web Service Description Language document describing the Web service.

11. The method of claim 1, wherein generating the Web service client proxy comprises:

generating a deployable Web service client proxy.

12. The method of claim 1, wherein generating the Web service client proxy comprises:

generating a standalone Web service client proxy.

13. An application server comprising:

a network interface to access a description of a Web service; and

a processor and logic executable thereon to

generate a Web service client proxy based, at least in part, on the accessed description of the Web service;

provide a client protocol implementation for the generated Web service client proxy, wherein the provided client protocol implementation is to process a message exchanged between the Web service client proxy and the Web service; and

configure a feature of the client protocol implementation to define a behavior of the Web service client without regenerating the Web service client proxy.

14. The application server of claim 13, wherein the processor and logic executable thereon to configure a feature of the client protocol implementation comprises:

a processor and logic executable thereon to configure an authentication type for a client authentication protocol implementation to define an authentication type for the message exchanged between the Web service client proxy and the Web service.

15. The application server of claim 13, wherein the processor and logic executable thereon to configure a feature of the client protocol implementation comprises:

a processor and logic executable thereon to configure a HyperText Transport Protocol (HTTP) proxy for a client HTTP proxy protocol implementation to define an HTTP proxy for the message exchanged between the Web service client proxy and the Web service.

16. The application server of claim 13, wherein the processor and logic executable thereon to configure a feature of the client protocol implementation comprises:

a processor and logic executable thereon to configure a wrapper for a client wrapper protocol implementation to define a wrapper for the message exchanged between the Web service client proxy and the Web service.

17. The application server of claim 13, wherein the processor and logic executable thereon to configure a feature of the client protocol implementation comprises:

a processor and logic executable thereon to configure a session feature for a client session protocol implementation to define a session feature for the message exchanged between the Web service client proxy and the Web service.

18. The application server of claim 13, wherein the application server is a Web application server.

19. The application server of claim 18, wherein the application server is a Java 2 Enterprise Edition (J2EE) application server.

20. A Web service client comprising:

a client application to invoke a method of a Web service;

a Web service client proxy coupled with the client application to expose the method of the Web service to the client application and exchange a message with the Web service; and

a protocol implementation coupled with the Web service proxy to process a message exchanged between the Web service client proxy and the Web service.

21. The Web service client of claim 20, wherein the protocol implementation is a security protocol implementation to provide a security service for the message.

22. The Web service client of claim 21, wherein the security protocol implementation is an authentication protocol implementation to authenticate the message exchanged between the Web service client proxy and the Web service.

23. The Web service client of claim 22, wherein the authentication protocol implementation is to implement a digital certificate protocol for the message.

24. The Web service client of claim 21, wherein the security protocol implementation is to implement an encryption protocol implementation to provide an encryption service for the message.

25. The Web service client of claim 20, wherein the protocol implementation is a wrapper protocol implementation to provide a wrapper for the message.

26. The Web service client of claim 25, wherein the wrapper protocol implementation is a header protocol implementation to process a header for the message.

27. The Web service client of claim 26, wherein the header protocol implementation is a Simple Object Access Protocol (SOAP) header implementation to process a SOAP header for the message.

28. The Web service client of claim 20, wherein the protocol implementation is a session protocol implementation to process a session between the Web service client proxy and the Web service.

29. The Web service client of claim 20, wherein the protocol implementation is a HyperText Transport Protocol (HTTP) proxy protocol implementation to establish an HTTP proxy for the message.

30. The Web service client of claim 20, wherein the protocol implementation is a pluggable protocol implementation.

31. The Web service client of claim 20, wherein the client application is a Java based client application.

32. The Web service client of claim 20, wherein the Web service client proxy comprises:
a deployable Web service client proxy.

33. The Web service client of claim 20, wherein the Web service client proxy comprises:
a standalone Web service client proxy.

34. A system comprising:

a first node having a Web service to exchange a message with a Web service client; and

a second node coupled with the first node, the second node having the Web service client including

a client application to invoke a method of the Web service,

a Web service client proxy coupled with the client application to expose the method of the Web service to the client application and exchange the message with the Web service, and

a protocol implementation coupled with the Web service proxy to process the message exchanged between the Web service client proxy and the Web service.

35. The system of claim 34, wherein the protocol implementation is a security protocol implementation.

36. The system of claim 34, wherein the protocol implementation is a wrapper protocol implementation to provide a wrapper for the message.

37. The system of claim 34, wherein the protocol implementation is a session protocol implementation to process a session between the Web service client and the Web service.

38. The system of claim 34, wherein the protocol implementation is an HyperText Transport Protocol (HTTP) protocol implementation to establish an HTTP proxy for the message.

39. The system of claim 34, wherein the protocol implementation is a pluggable protocol implementation.

40. The system of claim 34, wherein at least one of the first node and the second node is an application server.

41. An application server comprising:

a client application to invoke a method of a Web service;

a Web service client proxy coupled with the client application to expose the method of the Web service to the client application and exchange the message with the Web service;

a protocol implementation coupled with the Web service proxy to process the message exchanged between the Web service client proxy and the Web service; and

a means for setting a feature of the client protocol implementation to define a behavior of the Web service client without regenerating the Web service client proxy.

42. The application server of claim 41, wherein the means for setting a feature of the client protocol implementation to define a behavior of the Web service client without regenerating the Web service client proxy comprises:

a means for selecting an authentication type for a client authentication protocol implementation to define an authentication type for the message exchanged between the Web service client proxy and the Web service.

43. The application server of claim 41, wherein the means for setting a feature of the client protocol implementation to define a behavior of the Web service client without regenerating the Web service client proxy comprises:

a means for selecting a HyperText Transport Protocol (HTTP) proxy for a client HTTP proxy protocol implementation to define an HTTP proxy for the message exchanged between the Web service client proxy and the Web service.

44. The application server of claim 41, wherein the means for setting a feature of the client protocol implementation to define a behavior of the Web service client without regenerating the Web service client proxy comprises:

a means for selecting a wrapper for a client wrapper protocol implementation to define a wrapper for the message exchanged between the Web service client proxy and the Web service.

45. An article of manufacture comprising:

an electronically accessible medium providing instructions that, when executed by an apparatus, cause the apparatus to

access a description of a Web service;

generate a Web service client proxy based, at least in part, on the accessed description of the Web service;

provide a client protocol implementation for the generated Web service client proxy, wherein the provided client protocol implementation is to process a message exchanged between the Web service client proxy and the Web service; and

configure a feature of the client protocol implementation to define a behavior of the Web service client without regenerating the Web service client proxy.

46. The article of manufacture of claim 45, wherein the instructions that, when executed by the apparàtus, cause the apparatus to configure a feature of the client protocol implementation include instructions that cause the apparatus to

configure an authentication type for a client authentication protocol implementation to define an authentication type for the message.

47. The article of manufacture of claim 45, wherein the instructions that, when executed by the apparatus, cause the apparatus to configure a feature of the client protocol implementation include instructions that cause the apparatus to

configure a HyperText Transport Protocol (HTTP) proxy for a client HTTP proxy protocol implementation to define an HTTP proxy for the message.

48. The article of manufacture of claim 45, wherein the instructions that, when executed by the apparatus, cause the apparatus to configure a feature of the client protocol implementation include instructions that cause the apparatus to

configure a wrapper type for a client wrapper protocol implementation to define a wrapper type for the message.